

# Work Order ID 65238

January 10, 2011 10:01:14 AM



Page 1

Item ID:	D4194-3	Accept		Setup	Start	
Revision ID:	PRELIM				Stop	
Item Name:	Plunger Bumper					
Start Date:	1/10/11	Start Qty: 2.00		Cust Item ID:		
Required Date:	1/28/11	Req'd Qty: 2.00		Customer:		
Reference:						

Approvals:	Process Plan: <u>CL</u>	Date: <u>10/01/10</u>	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr								
D4194	<u>PA3</u>	<u>11-01-29</u>							

100		0.00				<u>2</u>	<u>0</u>		
-----	--	------	--	--	--	----------	----------	--	--

Doosan	Memo	0.00							
Doosan Lathe	turn as per Dwg 7 Folio FA984 FOLIO REV: <u>PA3</u> Dwg Rev: <u>PA3</u>								
	Deburr		<u>11/1/20</u>						

110	QC2- Inspect parts off machine FAI/FAIB	0.00				<u>2</u>	<u>0</u>		
-----	---	------	--	--	--	----------	----------	--	--

QC	Memo	0.00							
Quality Control			<u>11/1/20</u>						



PRELIMINARY ISSUE

MATERIAL CERTIFICATION  
REQ'D UPON DELIVERY

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

January 10, 2011 10:01:13 AM

Work Order ID: 65238



Parent Item: D4194-3



Parent Item Name: Plunger Bumper

Start Date: 1/10/11

Required Date: 1/28/11

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A NEW ISSUE 10-10-20 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
<del>M4130NR0.375</del> <i>mdelrin R.500</i>		Purchased	No			100	f	11.7500	0.045	0.094737			

4130 steel RD bar .375"

Location

MAT032

Loc Qty

11.75

Loc Code

108059

11.75

M109571

1st

*500 Delrin*  
*Jan 11.01.20*

*SA 1/11/20*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

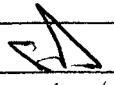
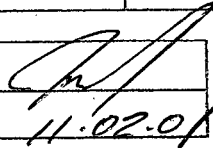
**NOTE:** Date & initial all entries

DART AEROSPACE LTD		Work Order: 65238
Description: Plunge Bump		Part Number: 4194-3
Inspection Dwg: 4194 Rev: PA3		Page 1 of 1

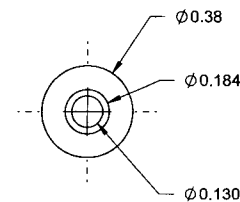
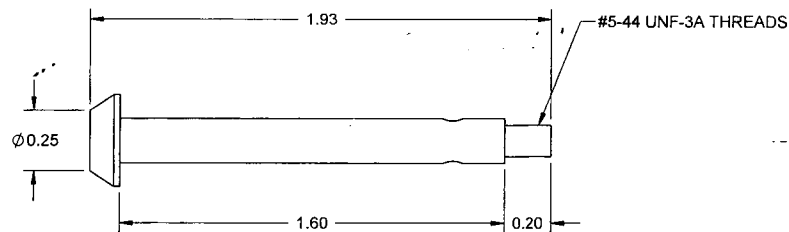
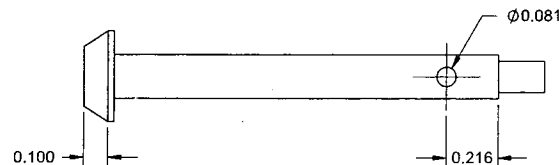
### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
.01X45°	±.030	.01X45°	/			
.094	±.010	.093	/			
.439	±.010	.441	/			
.166	±.010	.165	/			
45°	±.5°	45°	/			
.15	±.030	.15	/			
.20	±.030	.20	/			
.09	±.030	.09	/			
Ø.374	±.010	Ø.375	/			
Ø.218	±.010					
.35	±.030	.351	/			
<del>5-44UNF-3A</del>	<del>N/A</del>	<del></del>				
5-44UNF-3A	N/A	5-44UNF-3A	/			

Measured by: 	Audited by: 	Prototype Approval: N/A
Date: 11/1/20	Date: 11.02.01	Date: N/A

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	



SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 65238

*CL1110110*

# **D4194-1 PLUNGER STEM**

**PRELIMINARY ISSUE**

*10.10.28*

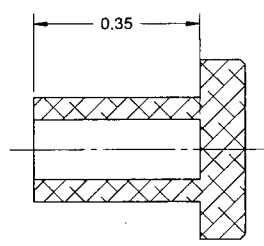
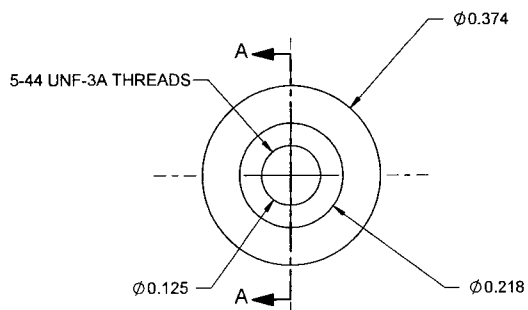
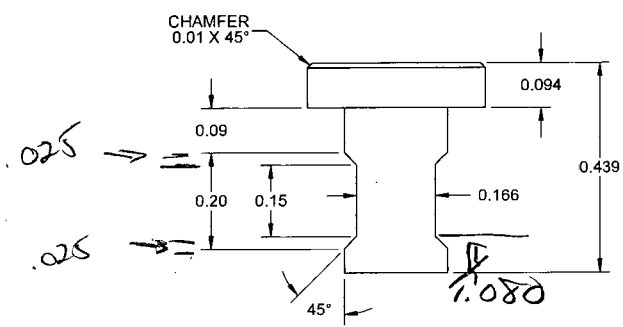
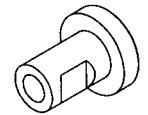
## **NOTES:**

- 1) MATERIAL: AISI 4130N STEEL ROUND BAR  
PER MIL-S-6758  
OR AMS 6348/6370/6528  
REF DART SPEC M4130N-R
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.02 lbs

PA3	NEW ISSUE		10.10.28
REV.		DESCRIPTION	BY DATE
DESIGN		<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED			
MFG. APPR.			DRAWING NO. REV. PA3
APPROVED			D4194 SHEET 1 OF 3
DE APPR.			TITLE SCALE
			PLUNGER NTS
DATE	10.10.28		COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



109571



SECTION A-A

STOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 65238

D4194-3 PLUNGER BUMPER

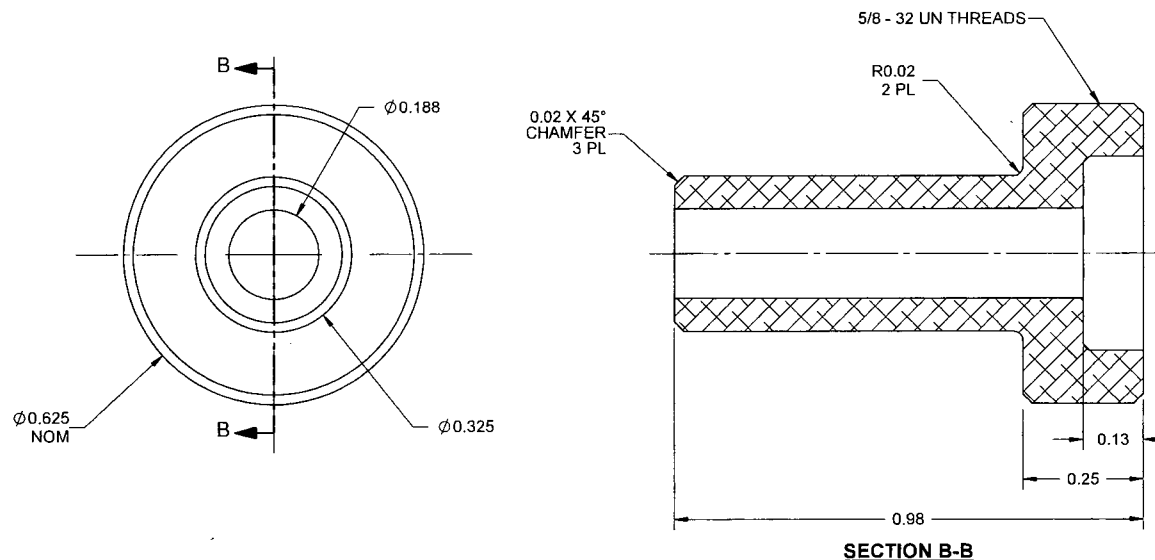
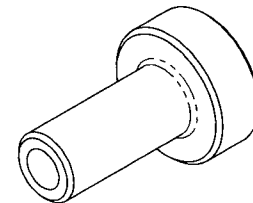
PRELIMINARY ISSUE

10.10.28

NOTES:

- 1) MATERIAL: BLACK DELRIN II 150E OR ACETRON GP ACETAL  
REF DART SPEC M-DELRIN-R
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.00 lbs

DESIGN	AS	DART AEROSPACE LTD	
DRAWN	AS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. PA3
MFG. APPR.		D4194	SHEET 2 OF 3
APPROVED		TITLE	SCALE
DE APPR.		PLUNGER	NTS
DATE	10.10.28	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	



SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 65238

**D4194-5 PLUNGER BUSHING**

**PRELIMINARY ISSUE**

10.10.28

**NOTES:**

- 1) MATERIAL: BLACK DELRIN II 150E OR ACETRON GP ACETAL  
REF DART SPEC M-DELRIN-R
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.00 lbs

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. PA3
MFG. APPR.		<b>D4194</b>	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		<b>PLUNGER</b>	NTS
DATE	10.10.28	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

# Checklist Print

January 10, 2011 10:01:13 AM

Work Order ID: 65238

Parent Item: D4194-3

Parent Item Name: Plunger Bumper

Start Date: 1/10/11

Start Qty: 2.00

Required Date: 1/28/11

Required Qty: 2.00

Comments: IPP REV:A NEW ISSUE 10-10-20 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M4130NIR0.375	mdelrinR.500	Purchased	No			100	f	11.7500	0.045	0.094737			
---------------	--------------	-----------	----	--	--	-----	---	---------	-------	----------	--	--	--

4130 steel RD bar .375"

## Location

MAT032

## Loc Qty

11.75

11.75

## Loc Code

M109571

1.24

500 Action  
Jan 11.01.20

SA 1/11/20

SABIC  
Middle  
East

سابك  
sabic

**SABIC Polymershapes**

1250 OLD INNES RD. 519 OTTAWA, ONT. K1B 5L3  
TEL: 613 745 7043 FAX: 613 745 8163

## CERTIFICATE OF COMPLIANCE

SOLD TO: DART AEROSPACE

DATE: 10/7/2008

YOUR PURCHASE ORDER : 7316

OUR SHIPPER NO: 084327

LINE ITEM # : 1

QUANTITY: 80 FT

DESCRIPTION: ACETRON GP ROF BLACK .500" DIA

8  
08/10/09

THESE PARTS WERE MANUFACTURED IN ACCORDANCE WITH: ASTM D 4181

THIS IS TO CERTIFY THAT THE MATERIAL FINISHES AND FUNCTIONAL REQUIREMENTS OF THE ABOVE LISTED PARTS ARE IN ACCORDANCE WITH THE REFERENCE PROCUREMENT SPECIFICATIONS, CONTROL DRAWINGS OR PARTS DESIGNATION AND LATEST REVISIONS AS REFERENCED ON THE SUBJECT PURCHASE ORDER.

AUTHORIZED REPRESENTATIVE SIGNATURE

Jon Caldwell

JON CALDWELL  
BRANCH MANAGER

SABIC  
Innovative  
Plastics

سابك  
sabic

***SABIC Polymershapes***

1250 OLD INNES RD. 519 OTTAWA, ONT. K1B 5L3  
TEL: 613 745 7043 FAX: 613 745 8163

## **CERTIFICATE OF COMPLIANCE**

SOLD TO: DART AEROSPACE

DATE: 10/7/2008

YOUR PURCHASE ORDER : 7316

OUR SHIPPER NO: 084327

LINE ITEM # : 1

QUANTITY: 80 FT

DESCRIPTION: ACETRON GP ROF BLACK .500" DIA

S  
08/10/09

THESE PARTS WERE MANUFACTURED IN ACCORDANCE WITH: ASTM D 4181

THIS IS TO CERTIFY THAT THE MATERIAL FINISHES AND FUNCTIONAL REQUIREMENTS OF THE ABOVE LISTED PARTS ARE IN ACCORDANCE WITH THE REFERENCE PROCUREMENT SPECIFICATIONS, CONTROL DRAWINGS OR PARTS DESIGNATION AND LATEST REVISIONS AS REFERENCED ON THE SUBJECT PURCHASE ORDER.

AUTHORIZED REPRESENTATIVE SIGNATURE



JON CALDWELL  
BRANCH MANAGER

# DART

## Purchase Order

Date Oct 06, 2008	Page 1
Purchase Order Number PO00007316	

Dart Aerospace Ltd  
1270 Aberdeen St  
Hawksbury, Ontario K6A 1K7  
Phone: (613)632-9577  
Fax: (613)632-1053

**FAKED**  
*Clavoie*

**Vendor Address:**

SABIC Polymers  
9150 Airport Road  
Brampton, ON L6S 6G1  
Canada  
Phone (800) -267-1575  
Fax (613) 745-4291

**Ship To:**

Main Finished Goods Location  
Dart Aerospace Ltd  
1270 Aberdeen St  
Hawksbury, Ontario K6A 1K7

Reference	Contact	Vendor Number	PO Date	Terms	Ship Via	Expected Arrival
		VC-GEP001	Oct 06, 2008	N30	Purolator	Oct 10, 2008

Qty. Ordered	Item Number	Description	Expected Arrival	Drop-Ship	Unit Cost	UOM	Extended Price
80.0000	MDELRINR0500	Delrin Round Bar .50" Comments: MATERIAL: DELRIN II 150E OR ACETRON GP ACETAL SIZE: .500" ROUND BAR COLOR: BLACK	10/10/2008	No	1.150000	f	92.00
40.0000	MDELRINR0750	Delrin Round Bar 0.75" Comments: MATERIAL: AS ABOVE SIZE: .750" ROUND BAR COLOR: BLACK	10/10/2008	No	2.600000	f	104.00

MATERIAL CERTIFICATION  
REQ'D UPON DELIVERY

**Comments:****Tax Summary:**

GST 9.80  
GSTME 0.00  
GSTND 0.00

**Less:**

included tax

0.00

Subtotal

196.00

Total tax

9.80

Total purchase order in

CAD Dollars

205.80

Entered By: *CL* CLAVOIE

Approved By: *W*

M109571

\*\*\* SHIPPER \*\*\*

1/C 15.7

SABIC Polymershapes  
1250 Old Innes Rd., Unit 519

Ottawa, Ontario K1B 5L3  
PST 8056 9234  
PHONE: (613)745-7043 FAX: (613)745-4291

Page: 1

SOLD TO: DART AEROSPACE LTD

SHIP TO: DART AEROSPACE LTD

1270 ABERDEEN STREET  
HAWKESBURY ON K6A 1K7  
Canada

1270 ABERDEEN STREET  
HAWKESBURY ON K6A 1K7  
Canada  
1-613-632-5200

Our Order No	Customer	GST License	PST License	Invoice Terms	Ordered	Shipped	Taken By	RDD
084327	DARAFR	CHARGE GST	6112-5207	NFT 30 DAYS	06.10.08		conlant	08.10.08
Ship.Dcc.No	Salesrep	Customer P.O.#	Shipped Via	F.O.B.	Freight Terms		Inv. No.	Ship Date
01	93	00007316	PURULATOR		PREPAID + CHARGE			08.10.08

Ln#	Location	Ord	B/O	Ship Sku	Product Code	Description	U/Price
						***** DELIVERIES TO BE DONE BEFORE 4:00 PM , ADVISE SHIPPING CO. *****	
001		80	32	40 FT	91106305	ACETRON GP ROD - BLACK .500 DIA.	
002		40	0	40 FT	91106455	ACETRON GP ROD - BLACK .750 DIA.	
003		1	0	1 EA	0000005	THANK YOU FOR SELECTING SABIC POLYMERSHAPES	

Shippable Weight: 16.56 Lb

*11/10/09*

LINE No.	RECEIVING No.	PICKED BY	DATE	SHIPPED BY	DATE	VERIFIED	DATE
					11/10/08		

NO GOODS TO BE RETURNED WITHOUT APPROVAL FROM SABIC. ALL DISCREPANCIES MUST BE REPORTED WITHIN 10 DAYS.  
ALL RETURNS MUST HAVE VALID RETURNED GOODS AUTHORIZATION NUMBER CLEARLY MARKED ON ALL PACKAGES.

# Dart Aerospace Ltd

Dart Aerospace Ltd  
1270 Aberdeen St  
Hawksbury, Ontario K6A 1K7  
Phone: (613) 632-3336  
Fax: (613) 632-4443

## Receiving Slip

Date Oct 10, 2008	Page 1
Receipt Number RCP00009161	

### Purchase From:

SABIC Polymershapes  
9150 Airport Road  
Brampton, ON L6S 6G1  
Canada

### Ship To:

Main Finished Goods Location  
Dart Aerospace Ltd  
1270 Aberdeen St  
Hawksbury, Ontario K6A 1K7

Reference	Description	Contact	Vendor Number	PO Number
			VC-GEP001	PO00007316

Vendor Item Number	Item Number	Description	Qty. Received	UOM	Unit Cost	Extended Cost	Arrival Date
	MDELRINR0500	Delrin Round Bar .50" COLOR: BLACK SIZE: .500" ROUND BAR ACETAL MATERIAL: DELRIN II 150E OR ACETRON GP B/N109571	80.0000	f	1.150000	92.00	Oct 10, 2008
	MDELRINR0750	Delrin Round Bar 0.75" COLOR: BLACK SIZE: .750" ROUND BAR MATERIAL: AS ABOVE B/N109571	40.0000	f	2.600000	104.00	Oct 10, 2008

Comments:



# Receiving Report

Date: 8/10/9  
 Supplier: SABIC

Batch No: M109571  
 Dart P/O: 7316

Packing Slip: Yes ☒ No ☐  
 Invoice: Yes ☐ No ☒  
 Receipt: Cash ☐ Cr ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐  
 Waybill Attached: Yes ☐ No ☒ N/A ☐  
 Shipment Complete: Yes ☒ No ☐ N/A ☐  
 QC6 Inspection 8/10/9 ☒ N/A ☐  
 Work Order ☐ N/A ☒

## Discrepancies

Part Number	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments

Initials of receiver (if shipment OK) [Signature] Level 12

Production/Admin: 08/10/10  
 Date 08/10/10  
 Received/Costing 08  
 Initial 08

Location

Print

January 12, 2011 2:35:32 PM

Work Order ID: 65355

Parent Item: D4186-3

Parent Item Name: Bushing



Start Date: 1/12/11  
Start Qty: 2.00

Required Date: 1/28/11  
Required Qty: 2.00

Comments: IPP REV:A NEW ISSUE 11-01-07 VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MDELRINR0.500		Purchased		No		100	f	106.5000	0.065	0.136842			
Delrin Round Bar .50"													

Location

MAT050

102828  
109571  
18355  
3723

Loc Qty

106.5  
2  
37.5  
64  
3

Loc Code

SA 11/1/24  
0.1341

Sabir P/O: 7316 2008/09  
G.E. Pals RCP: 9161

## Checklist Print

January 10, 2011 10:01:13 AM

Work Order ID: 65238



Parent Item: D4194-3

Parent Item Name: Plunger Bumper

Start Date: 1/10/11

Start Qty: 2.00

Required Date: 1/28/11

Required Qty: 2.00

Comments: IPP REV:A NEW ISSUE 10-10-20 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M4130NR0.375" <i>Model R.500</i>		Purchased	No			100	f	11.7500	0.045	0.094737		<i>SA 1/11/20</i>	
4130 steel RD bar .375"													

Location

MAT032

Loc Qty

11.75

11.75

Loc Code

108059

M1095711.25

*500 Nelson*  
*Jan 11.01.20*